DOCUMENT RESUME

ED 305 499 CE 052 239

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TITLE Assessing Needs for Education for Employment. A Product of the Project "Change, Technology and Vocational Education."
INSTITUTION Northern Illinois Univ., De Kalb. Office for Vocational, Technical, and Career Education.
SPONS AGENCY Illinois State Board of Education, Springfield. Dept. of Adult, Vocational and Technical Education.
PUB DATE Feb 89
NOTE 16p.
PUB TYPE Information Analyses (070) -- Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Educational Needs; *Education Work Relationship; *Evaluation Methods; Evaluation Utilization; *Job Training; *Needs Assessment; Postsecondary Education; Program Development; Research Methodology; Secondary Education; Staff Development; *Vocational Education

ABSTRACT

This manual provides guidelines for needs assessments based on training and development programs designed and used by business and industry. The guide defines needs and needs assessments and describes how to implement the process, using an eight-level needs assessment. Information is provided on stages of needs assessment, the process of assessing needs, diagnosing the need for change, deciding who should be involved, determining who is in charge, sources for needs assessment, tools used to assess needs (e.g., interviews, small group meetings, and surveys), and reporting the data. A list of 13 references is included. (KC)

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Assessing Needs for Education for Employment

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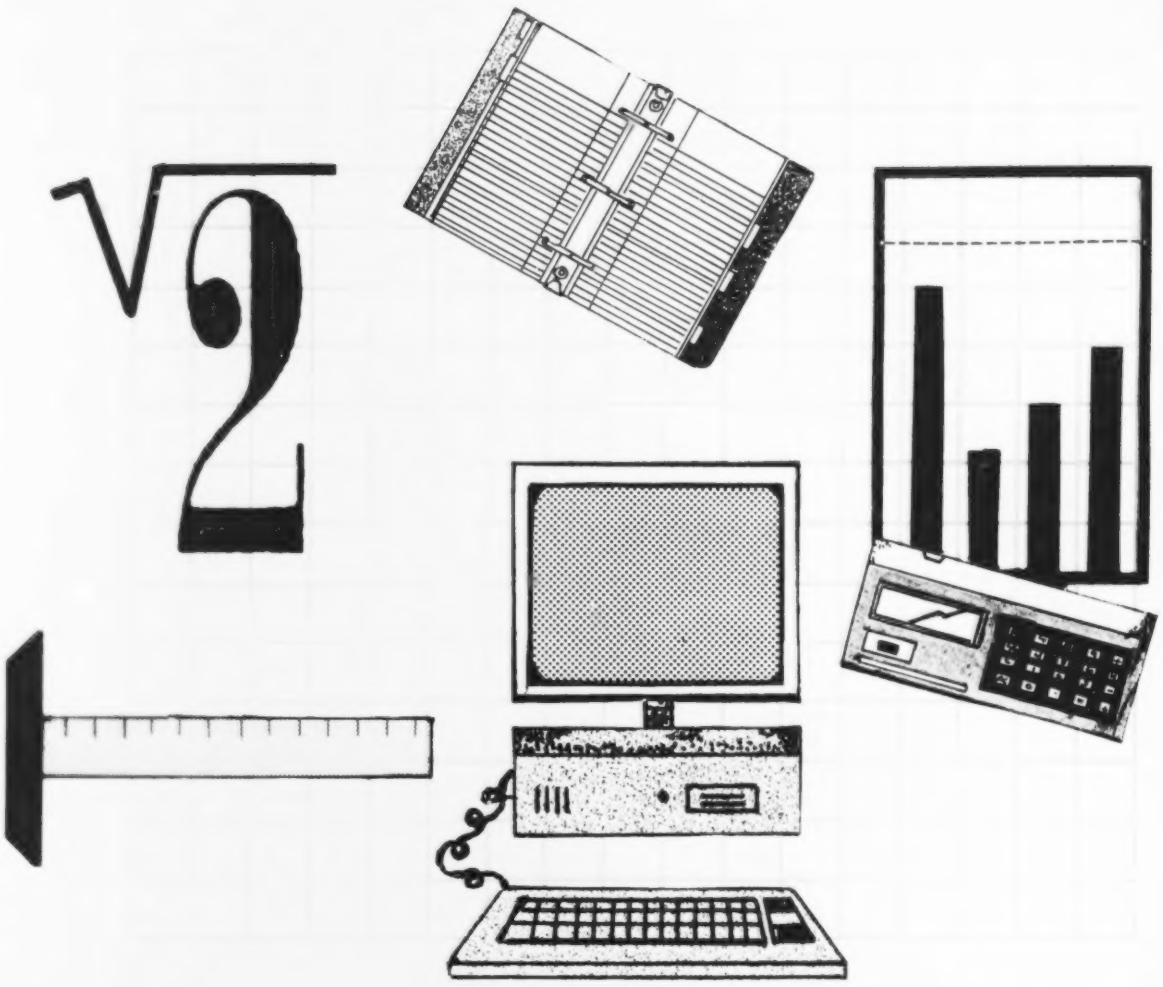

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Assessing Needs for Education for Employment

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Vocational Education Program Improvement Section

February, 1989

OT-IO-690

Assessing Needs for Education for Employment

Preface

The past few yeas have been exciting times for vocational educators in Illinois. The State has undertaken a massive reform initiative that is concerned with enhancing the quality, improving the efficiency, and increasing access to vocational education. The Education for Employment initiative is a comprehensive effort for planning, implementing and evaluating educational programs that prepare people for work or further education.

The Office for Vocational, Technical and Career Education, Northern Illinois University, functions as a liaison office with the Illinois State Board of Education, Department of Adult, Vocational and Technical Education. The purpose of this office is to conduct activities that will improve vocational education both on and off campus. Researchers within the office are pleased to offer to the vocational education community this document titled Assessing Needs for Education for Employment. Hopefully, the document will be useful to vocational educators who must assess staff development, curriculum, and equipment needs as a part of long-range planning. This document was created by gleaning literature that pertained to needs assessment processes used in the broad field of human resource development. We hope that the content of this document provides food for thought for educational leaders charged with assessing needs in Education for Employment.

What Is?...What Should Be?

Vocational education personnel in Illinois, at all levels—state, regional and local—have been involved in a process to change the way in which educational services are planned and delivered. A well conceived and comprehensive plan to revitalize education for employment (EFE) in Illinois has been developed. Among its strategies are requirements for personnel to decide 'what is,' 'what should be,' and then to determine the discrepancies between the two. Planning for and implementing **change** within EFE systems can be patterned from practices applied in the business community. The prototype follows a logical pattern: it recognizes a problem, gathers data, makes diagnoses, devises a plan of action, and evaluates the results (Lippett, Langseth & Mossop, 1985).

Before beginning the process of organized change, individuals in key positions need to conceptualize what are the problems, what are the possible solutions, and what are the best and most efficient means to get at the solution(s). Unfortunately, individuals responsible for effecting change are seldom trained in how to manage it (Kirkpatrick, 1985).

Human resource development specialists in the business community, who are often responsible for effecting change, begin the process by assessing needs. A needs assessment provides answers to three questions. Where are we? Where do we want to go? How do we get there from where we are? Needs assessment is an investigative process intended to produce solutions to defined problems.

A **needs assessment** is a formal process that identifies discrepancies between current outcomes and required or desired outcomes (Kaufman, 1987). This well planned and systematic process collects information in the form of opinions, perceptions, and feelings from a variety of sources. The process also includes reviewing existing files, records and pertinent printed materials.

Needs assessment is a management tool which can be used by vocational educators to identify gaps that exist between 'what is' and 'what should be.' Vocational educators can use the results of a needs assessment to make informed decisions when planning curriculum, staff development, training programs, seminars, workshops, clinics and conferences that will meet the needs of students, teachers, administrators and/or the community. It also provides a way for vocational educators to monitor changing needs, project future trends and/or conditions and to set priorities for program planning (Pinola, 1984).

Assessing Needs for Education for Employment provides guidelines for needs assessments based on training and development programs designed and used by business and industry. The guide defines needs and needs assessments and describes how to implement the process. This document is intended to help vocational educators who must assess staff development, curriculum and equipment needs for their long range planning.

Sonia Smith

Assessing Needs for Education for Employment

Change must rightfully be regarded as the vital, creative, exciting, and energizing force that it really is. Planned organizational change is one way that this magnificent energy can be harnessed for the good of persons everywhere (Margules & Wallace, 1973, p. 157).

Defining a Need

Distinguishing a need from a desire or goal is an important initial step toward changing the way teachers or others deliver information, plan programs or project future conditions. Goals generally are broad and future oriented statements describing outcomes or end purposes which may or may not be generated by defined needs. A **need**, on the other hand, is "a quantifiable, measurable gap in performance, attitude or achievement between the ideal and the real" (Saithory, 1977, p. 24). A need is the discrepancy between two standards, the ideal and the real. The 'gaps' or needs are in the context of results, rather than process or method. For example, a high school guidance counselor reported to the principal that only 20% of the students seeking employment and previously enrolled in vocational education programs for two or more years were employed six months after graduating from high school. The principal took the matter to the advisory council for the vocational education department and asked them to develop a set of guidelines to rectify the situation. Among the recommendations made by the advisory council was a goal that at least 50% of students graduating from vocational programs, who were seeking employment, should be in the workforce six months after graduating from high school.

In the above scenario, the real is an undesirably low placement rate—the ideal is program completers who possess marketable entry-level skills. The discrepancy between the two standards defines the need—a modified, revitalized or new program for students.

Planning a Needs Assessment

Kaufman and English (1981) provide a word of caution for anyone planning a needs assessment: identifying trivial or inappropriate needs will produce disappointing results. Therefore, it is essential to select correct or appropriate needs that must be resolved. For desired outcomes to be realized, the relationship between means and ends must be distinct. That is, desired outcomes (ends) must be clearly defined before an appropriate tool or method (means) can be selected to produce the desired end results. The title of a book written by David Campbell (1974), <u>If You Don't Know Where You Are Going, You'll Probably End Up Somewhere Else</u>, is applicable to this situation.

A needs assessment is a tool that reduces the possibility of implementing interventions unrelated to the identified problems or gaps. A needs assessment that includes systematic planning and results in goal directed activities will more likely achieve the desired outcomes.

Closing the Gap Between the Real and the Ideal

Closing the gap between the real and the ideal requires a process that goes beyond assessing needs. Saithory (1977) contends that one must go beyond locating and prioritizing gaps between the real and the ideal because assessing needs is only a part of the process for effecting change. Assessing needs, however, is the way to begin the process; it calls for special planning as each problem is unique. The planning should be logical, orderly, responsive, and responsible (Kirkpatrick 1985).

A review of literature suggests eight 'levels' commonly used to effect change. The first six levels assess needs; the final two, implementation and evaluation, 'go beyond' a needs assessment and complete the process.

A needs assessment does not necessarily begin at Level 1. The nature of the problem and the amount of available data determine the level at which the assessment begins. For example, the director of an area vocational center wants to know whether the health occupations curriculum supports the goals and purposes of the vocational center. The director begins the investigation at Level 3 of the model since the goals and purposes for the center are defined and assumed to be on target. Generally, in a situation of this nature, only individuals associated with the organization are involved in the needs assessment. The referent for this type of an assessment is from within the organization and is, what Kaufman (1987) calls, an internal mode for assessing needs. The parameter or framework within which the planners must operate is in place and not subject to redefinition or change.

On the other hand, a somewhat different approach is used when the director wants to know what skills and knowledge students need to master prior to exiting the center's programs that will enable them to function within a technologically oriented society. The process for this scenario begins at Level 1 where skills, knowledge, and attitudes important outside the school are studied and identified (Kaufman & English, 1981). This type of needs assessment, one which seeks input from outside the school, is an external mode for assessing needs.

Level 1: *Analyzes or conceptualizes the current goals and philosophy of the organization, if they exist, to more fully understand the current emphases and to review why they are (were) important.*

Level 2: *Establishes goals that reflect the idea—'what should be.'*

Level 3: *Collects and analyzes data that accurately portray current conditions in terms of 'what is.'*

Level 4: *Analyzes the data and determines what are the problems and what are the discrepancies between the goals and current conditions.*

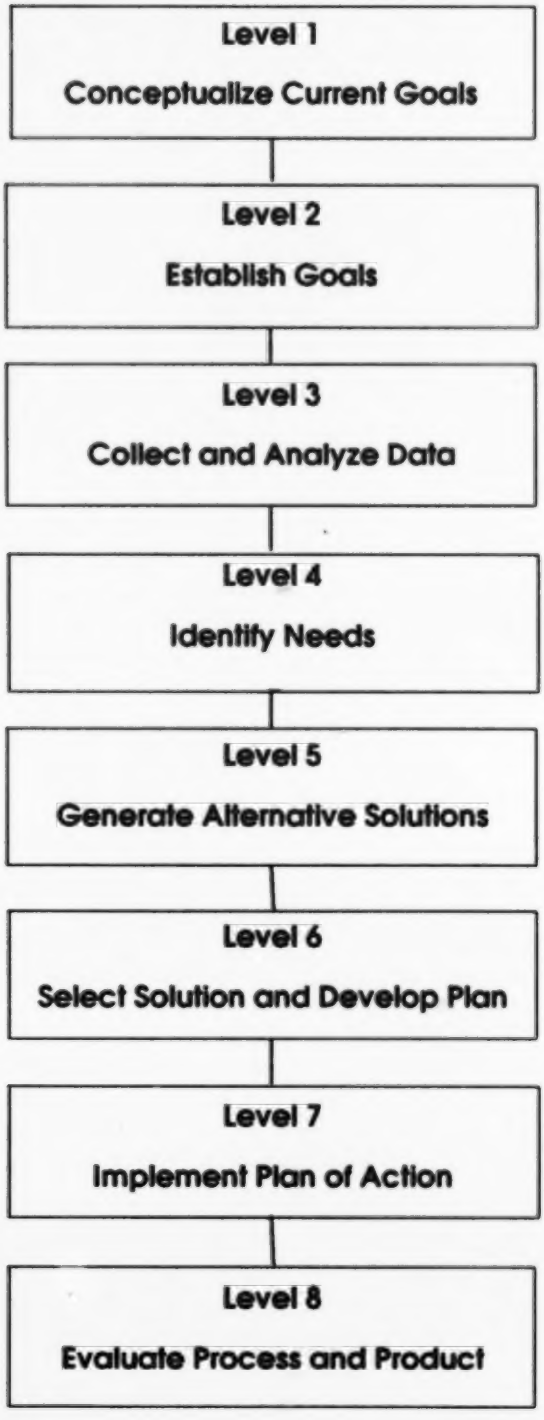
Level 5: *Generates alternative solutions which get at resolving discrepancies between the goals and current conditions.*

Level 6: *Selects the solution(s) most likely to resolve the problem(s) and designs a plan of action.*

Level 7: *Implements the plan of action.*

Level 8: *Performs formative and summative evaluations to determine whether the gaps have narrowed between 'what is' and 'what should be.'*

Levels of Assessing Needs



Stages of Needs Assessment

Needs assessments are frequently conducted in stages. The number of stages in a needs assessment is based on two considerations (Rossett, 1987). The first deals with the amount of information the planner needs to fully understand the problem; the second concerns the amount and kind of resources made available to the planner. Individuals with first-hand knowledge about a given situation and who feel confident with their expertise on the subject will need fewer stages of assessment than someone who has little experience or knowledge about the area under investigation.

Individuals conducting a needs assessment may begin the process by discussing their concerns with a few cohorts. They may then invite different individuals to form a small group to discuss the issue. After analyzing the information gathered from these two experiences, they may decide to design a survey instrument to collect data reflecting the opinions of teachers affected by the problem. Planners in the preceding scenario were uncomfortable with their level of expertise and felt a need to generate information that would enhance their level of understanding.

The Process of Assessing Needs

Before an organization or one of its components can determine where they are going, they need some understanding of where they are presently and how they got there. Reviewing pertinent files and records and talking with individuals who have some knowledge of the organization's past are ways to develop an understanding about how the organization or unit evolved and what elements influenced the present state. (The term 'unit' is used to designate the organized structure under study. It infers a single group that is an integral part of the whole.) The goals and objectives reveal the philosophy and discloses that which is important to the organization. The scope of the problem dictates the kind of review undertaken.

If, for example, the problem affects all aspects of an organization, its philosophical base as well as its major goals should be reviewed. The same procedure is used when resolving problems affecting fewer individuals, such as a unit, department or educational program. The review at this level, however, is concerned primarily with the objectives and goals of the unit under study and how the program, department, or unit fits into the structure of the larger organization. The initial phase of the problem solving process need not be lengthy and time consuming. Developing an understanding about the organization and possible barriers which might impede the change process is what is important.

Diagnosing the Need for Change

Organizations react with change whenever there is a modification of their environment, technology, goals, motivations, or perceived values (Lippett, Longseth, & Mossop, 1985). Recommendations for change can come from either internal or external sources, such as, administrative personnel, instructors, parents, business leaders, and/or students. Recommendations will also come from the group formed to plan and implement the needs assessments. They will have notions about what needs should be addressed.

The process may begin by asking probing questions relative to diagnosing the

unit's need for change. Examples of questions which explore the content within which a unit functions and provides some insight as to the forces impacting on it are listed in Table 1.

Other kinds of questions that may need exploring depend on the level at which the needs assessment begins and the types of concerns to be studied, ie., personnel, facilities, tasks performed, outputs and productivity, technological impacts, etc.

Producing a clearly defined problem statement is critical to this phase of the needs assessment. If the scope of the defined problem is broad and complex, it should be reduced to manageable parts. The most urgent problem should receive initial attention while subsequent sub-problems should be addressed at a later time or by another group.

Deciding Who Should Be Involved

Planners should take a critical look at who will be affected by the proposed changes. Those individuals should be represented in some stage of the needs assessment. Other good choices are individuals who have expertise in areas designated for change or who have knowledge about the problems to be resolved. Conceivably, individuals involved in the assessment process may or may not be affiliated with the unit or organization. Members must also have open and inquiring mind-sets and be able to make decisions that are not influenced by established goals or existing programs.

Table 1

Questions Relative to Diagnosing the Need for Change

1. What is the main purpose(s) of the unit?

2. How does the unit function within the context of the whole organization?

3. What constituency is served by this unit?

4. What are their (the constituency's) expectations?

5. How are these expectations being met?

6. How has technology impacted the function or services rendered by the unit?

7. What significant changes have taken place within supporting units, administrative structures, delivery systems, governing codes or policies, the economy, etc.

Determining Who Is In Charge

The individual initiating the change may assign the responsibility of overseeing the change initiative to another person; or the initiator may choose to lead the initiative. Individuals serving as leaders must have an ability to guide others, manage details, and keep the group on task. The leader assists the group in setting short-term and long-term goals, scheduling meetings, planning the agenda, assigning tasks to group members when necessary, coordinating the group's activities, consulting with specialists when appropriate, and evaluating the group's progress on an on-going basis.

Leaders must have the support of upper administration and keep them informed about the progress made by the groups. To insure successful outcomes, top administrators must: a) devote a substantial

amount of time and resources to the process; b) make a commitment to long-range planning; c) recognize as normal the human reaction to resist change; and d) provide opportunities for innovative and administrative types to work together to achieve organizational outcomes (Melton, 1977).

Sources for Needs Assessment

The question, according to Rossett (1987), is not whether to do a needs assessment, but how much needs assessment to do, and what tools to use to do it. For example, the process of determining what is—the way things actually are—can require information from several different sources. The sources may include records, filed information, printed documents, as well as individuals who have knowledge about the problem. The individuals may include those who are involved in the problem situation (student, teachers, employers, etc.), specialists and community members. Anyone who can reliably describe the optimal behavior and/or have knowledge of a given situation are valuable sources of information. Sorting out who should be queried and determining what data are available for review will need thoughtful consideration. Once this decision is made, the assessment process can proceed.

Tools Used to Assess Needs

Instruments are used to obtain data and provide information to the sponsoring organization or unit about the population under study. Tools basic to needs assessment are interviews, surveys, and small group meetings (Rossett, 1987). The purpose of the needs assessment and the utility of the tool determines which of the three is used.

Interviews. The interview is used extensively to extract needed information from different sources and is useful in the following situations: a) when adequate resources are made available for the study; b) when only a small sample is involved; c) when a high response rate is not required; and d) when an in-depth analysis is needed. Successful interviews can be conducted in person or by telephone. It is important for the interviewer to know under what circumstances each is used. Table 2 summarizes guidelines suggested by Rossett (1987) to help interviewers make this decision.

There are certain advantages to using the interview to collect data. The interviewer is better able to ask in-depth questions and to follow up with probing questions. A skilled interviewer will be privileged to information that respondents would not likely disclose about themselves if another method were used to gather information (Borg & Gall, 1979). The interviewer has greater flexibility during the questioning process to redirect or channel the subject's responses. However, the interviewer must take precautions and avoid subjective or biased reporting. Interviewers who have preconceived notions about outcomes may, consciously or unconsciously, color the interview session by asking leading or ambiguous questions.

The relationship between the interviewer and the respondent could also bias an interview. The respondent may have negative feelings about the interviewer and hold back pertinent information that could move the interview forward. Conversely, the respondent may

Table 2

Telephone Interview vs. Personal Interview

Telephone	Personal
When several contacts are needed	When in-depth information is needed
When giving information about the project	When visual materials are crucial to the interview
When resources are limited	When establishing a working relationship is important to the project
When support is needed from disinterested or opposing parties	When complex or controversial issues are discussed
When establishing a working relationship through occasional contacts	When information is needed from a few key individuals
When limited information is needed	

be overly eager to accommodate the interviewer and thus provide responses that he/she feels the interviewer wants to hear.

Interviewers should remember the following points: be a good listener, enter the session with an open mind, be attentive, respectful, and maintain confidentiality (Birmbrauer & Tyson, 1985).

Small group meeting. Small group meetings provide an opportunity for individuals to interact—to share ideas and information. The needs assessment planner will probably choose to meet with a group of individuals to inform them of a plan to assess needs, to obtain information from them, or to request their help in planning and/or implementing the needs assessment.

Conceivably, the planner, depending on the number of stages in the assessment, will meet with more than one group of individuals.

Those who participate in group meetings should be there because they have something to contribute to the resolution of the problem. The planner should have some idea of how each individual will contribute to the group's assigned task. Some questions that will aid in the selection process are the following:

1. Is the person skilled in fleshing out ideas?

2. Does he/she have expertise in areas that others do not?

3. Is the individual willing to share ideas and ask questions?

4. Will he/she assume a partnership role in the resolution of the problem?

To gain the support of the prospective group members, the following information should be explained during the initial contact: a) the purposes of the project; b) why the group is being formed; c) who will be participating in the group; d) what will be expected from the par-

ticipants; and e) what is to be accomplished.

Surveys. Surveys are commonly used to solicit opinions from a sample of a targeted population. It is a good method to use when collecting data from a large sample and where standardized information is desirable. Surveys are conducted for the purpose of finding out how individuals perceive a problem or situation. The problem or situation must first have clearly defined objectives—know why the survey is being distributed; what kinds of information is needed; and what audience is most likely to have the information.

Another factor which should not be overlooked is data analysis. What methods will be used to analyze the data? If descriptions of how responses are divided among the items are to be measured, then percentages will be computed to describe the data. Suppose, however, that an objective is to study relationships between and/or among variables. For such a case, statistical procedures might be appropriate. Consulting a statistician to help with this phase of the needs assessment may be desirable and should take place early in the planning stages.

Questions asked on surveys should be directly related to the objectives. Each question should be purposeful and designed to produce useful information. Questions may be structured to allow participants to respond freely by expressing their own opinions, feelings, or perceptions. These kinds of questions are open–ended and generate data that are generally more difficult to analyze and quantify than questions which permit only certain responses such as multiple choice type questions (Borg & Gall, 1979).

Rossett (1987) identifies six types of questions that are asked to generate the desired information. A brief description of each follows:

Type 1: *Seeks general information about the problem—what is going on and/or what should be going on.*

Type 2: *Seeks detailed information about the problem. The same kinds of questions can be asked in Type 2 questions that are asked in Type 1 but they seek more specific or in–depth information.*

Type 3: *Seeks information about what the respondent knows. Performance type questions are used to measure knowledge or skills.*

Type 4: *Seeks information about how the respondent feels about specific conditions, situations, or causes.*

Type 5: *Seeks information about causes or problems. Respondents express opinions about designated topics or concerns.*

Type 6: *Seeks descriptive information about the respondents, i.e., employment history, years of experience, age, sex, etc.*

Writing items for a survey instrument that represent the objectives and 'get at' the kinds of information needed can be a challenging and time consuming experience. Pfeiffer and Ballew (1988) recommend investigating what others have done in the field in the way of testing before investing time and resources in developing an original instrument.

Reporting the Data

Reporting the data should not be particularly troublesome if decisions regarding data analyses are made prior to design-

ing the instrument. The results of statistical procedures should be reported along with other descriptive information collected about the respondents.

Interpreting the meaningfulness of the data as well as defining the differences between the current conditions (what is), and the desired outcomes (what should be), may require the collaborative efforts of the planning group or some other designate. Kaufman and English (1981) recommend entering the data in a matrix, and listing the attributes under the headings **What Is** and **What Should Be**. The observed discrepancies between the two categories are needs. Needs are then prioritized according to their perceived importance. Card sorts and rating scales are among the tools which can be used to facilitate the identification process (Witkins, 1977). It is probable that the planning group may not reach consensus in prioritizing the items. To avoid unnecessary delays, the group should establish early in the proceedings what percentage of the group must agree before the item is listed among the priorities.

Recommendations for developing survey items:

1. All components of the survey instrument, i.e., instructions, questions or items, etc., must be specific and clearly stated. Avoid technical terms, jargon, or other words which may be unfamiliar to the respondents; respondents should make choices from the same frame of reference (Pfeiffer & Ballew, 1988).

2. Each item should ask only one question. Items that contain more than one idea cannot be answered by a single response. An item that states, "most women are forced into the labor market for economic reasons and therefore, should receive benefits from employers, such as paid maternity leave, access to child care facilities and flexible working hours," cannot be answered by a forced choice response category. The respondent may agree with one part of the item but not with both parts. 'Double-barreled' questions such as the preceding one cannot be answered with forced choice response categories (i.e., strongly disagree, disagree, agree, strongly agree, no opinion), and should not be used (Borg & Gall, 1978).

3. Biased or leading questions should be avoided. Individuals asked to respond to the statement, "Parents who abuse their children should be reported to the proper authority," would generally agree with the concept. Items should be constructed so that correct or desirable answers are not obvious.

4. Short items are preferred. Succinctly stated items are easier to understand and require less of the respondents' time to answer. The survey instrument should be neat, well organized, and as short as possible.

Data may reveal a positive relationship between current conditions and ideal conditions. In that case, the needs assessment provides some measure of the degree at which the ideal condition(goal) has been attained. Subsequent decisions or actions taken to 'close the gap' will

depend on the analysis and resolutions of the distinctions between the defined goals and the ordering of priorities (Pinola, 1984).

A Concluding Thought

A well-defined problem is a problem nearly solved (Melton, 1977). Prior to implementing changes at any level, planners must develop informed understandings of the problems and determine what steps must be taken to bring about desired changes. **Needs assessment** facilitates the process—it provides answers to three questions. Where are we? Where do we want to go? How do we get there from where we are? It is a management tool which can help educators identify gaps that exist between what is and what should be. It is transportable and can be used successfully by the entire education community.

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